

R E M A R K S

Claims 1-4, 6-8 and 10-17 are pending and stand ready for further action on the merits. Claims 5 and 9 have been cancelled. Claims 4, 14 and 15 have been withdrawn from consideration for being drawn to non-elected subject matter. Claims 1 and 7 have been amended to recite the subject matter of claim 5. The dependency of claims 2, 3, 10 and 11 has been modified. Claims 6 and 8 have been amended to be in independent form.

Support for new claim 16 can be found in claim 3. Support for new claim 17 can be found in the specification at page 42, lines 4-7, for the thermoplastic polyurethane resin and at page 42, lines 11-16, for the polyol compounds.

No new matter has been added by the above-amendment.

Election/Restriction

Applicants are confused regarding the Examiner's Election of Species. As the Examiner will recall, on July 8, 2004, Applicants made an Election of Species regarding the matrix compounds of claim 7 as follows:

(B) Claim 7 further defines the materials included in the interpenetrating network structure [of the matrix] or semi-interpenetrating network structure [of the

matrix]. The Examiner requests that Applicants elect one of: **(a)** hydroxyalkyl poly-saccharide derivative; **(b)** a polyvinyl alcohol derivative; or **(c)** a polyglycidol derivative in combination with a cross-linkable function group-bearing compound.

Applicants elect, with traverse, **(a)** hydroxyalkyl poly-saccharide derivative.

In response to this election, the Examiner has withdrawn claim 5 as being drawn to non-elected subject matter.

However, the Examiner has applied art which does not teach or suggest the use of the elected hydroxyalkyl polysaccharide derivatives. In the Examiner's prior art based rejection, the Examiner indicates that the reference teaches the claimed limitation of a matrix polymer, and the Examiner specifically cites as an example, a blend of a polyethylene oxide mixed with an acrylate polymer. And yet the skilled artisan would readily understand that a blend of a polyethylene oxide mixed with an acrylate polymer is not encompassed by elected species **(a)** hydroxyalkyl polysaccharide derivative.

Accordingly, it is clear that the Examiner has expanded the search to include other matrix polymers. However, it is unclear to what extent the search has been extended.

Without clear guidance by the Examiner on this matter, Applicants turn to the MPEP. According to MPEP 809.02, should the Examiner not find prior art, which renders the elected species unpatentable, the Examiner is required to expand the search to

include a reasonable number of additional species. Applicants respectfully submit that the scope of claim 1, includes a reasonable number of additional species for searching/examination purposes. In other words, Applicants assume that the Election of Species Requirement with respect to the matrix polymer has been withdrawn, since claim 1 includes a reasonable number of additional species for searching/examination purposes.

As the Examiner will note, claim 1 has been amended to recite that the matrix polymer is an unsaturated polyurethane compound (as previously defined in claim 5) and claim 8 has been amended to recite a matrix polymer that is a thermoplastic polyurethane containing ester groups. Applicants respectfully submit that this amendment to claims 1 and 8 does not incorporate non-elected subject matter.

Applicants note, with appreciation, that the Examiner has rejoined Group II, consisting of claims 11-13, with Group I, consisting of claims 1-10. Currently, claims 4, 14 and 15 have been withdrawn from consideration for being drawn to non-elected subject matter.

Claim Objections

Claim 7 is objected to under 37 CFR § 1.75(c) as being in improper form because a single claim cannot depend upon two claims.

In response, Applicants have amended claim 7 to recite the subject matter of claim 5. Accordingly, claim 7 now only depends from claim 6. As such, withdrawal of the objection is respectfully requested.

Issues under 35 USC § 102

Claims 1-3, 6, 8 and 10-13 are rejected under 35 USC § 102(b), as being anticipated by Ventura (US 6,015,638). Applicants respectfully traverse this rejection.

Comments regarding independent claims 1 and 8:

Ventura et al. illustrate the following polymers for a solid polymer electrolyte.

Examples of polymers useful as solid polymer electrolytes for purposes of the present invention include polyethers, polyesters, polyethylene oxides, poly(ethylene)imine, polyphosphazenes, polysiloxane, partially fluorinated polymethacrylates, or such polymers modified to include functionalized chains, e.g., alkylsulfonates, or the like. (Column 11, lines 36-41).

Ventura et al. are silent with respect to the unsaturated polyurethane compound of claim 1 or the thermoplastic polyurethane resin containing ester groups of claim 8.

In describing the requirements for rejection of a claim by anticipation, the Manual of Patent Examining Procedure (Section 2131) states:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference (ref. omitted)."

As mentioned above, Ventura et al. are silent with respect to the unsaturated polyurethane compound of claim 1 or the thermoplastic polyurethane resin containing ester groups of claim 8. In view of the fact that Ventura et al. fail to teach or suggest all of the limitations of independent claims 1 and 8, a *prima facie* case of anticipation cannot be said to exist.

Comments regarding independent claim 6:

The Examiner states that Ventura et al., in column 2, lines 29-45, teaches that single ion-conducting electrolytes, such as poly(ethylene oxide)-polyelectrolyte blends consisting of PEO mixed with acrylate polymer have been used.

However, this electrolyte does not have an interpenetrating network structure or a semi-interpenetrating network structure as required by claim 6 because the electrolyte is prepared by blending the two types of polymer, i.e., PEO and the acrylate polymer.

Furthermore, Ventura et al. are silent with respect to the type of polymers having a network structure. As such, Ventura et al. fail to disclose a polymer gel electrolyte comprising a plasticizer with at least two carbonate structures on the molecule and a polymer material having an interpenetrating network structure or a semi-interpenetrating network structure as required by claim 6.

The present specification describes the advantages of having an interpenetrating network structure or a semi-interpenetrating network structure at the paragraph bridging pages 16-17, which is herein reproduced for the Examiner's convenience:

Polymeric materials having an interpenetrating network structure or a semi-interpenetrating network structure (II) are characterized by a high affinity between the electrolyte solvent molecules and the ionic molecules, a high ion mobility, the ability to dissolve the electrolyte salt to a high concentration, and a high ionic conductivity.

In view of the fact that Ventura et al. fail to teach or suggest all of the limitations of independent claim 6, a *prima facie* case of anticipation cannot be said to exist.

Based on the foregoing, withdrawal of the rejection is respectfully requested.

Drawings

Applicants note that this application has been filed with one sheet of drawings. However, the Examiner has not acknowledged whether the drawings are acceptable. Applicants respectfully request that the Examiner indicates in the next communication whether the drawings are acceptable.

Conclusion

In view of the above-amendments and comments, it respectfully submitted that the claims are now in condition for allowance. A notice to such effect is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact **Garth M. Dahlen, Ph.D., Esq.** (Reg. No. 43,575) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

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overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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